

PROJECT INSPECTOR & ASSISTANT INSPECTOR Certification and Approval

IR A-7

REFERENCE: California Building Standards Administrative Code (Title 24, Part 1)
Sections 4-211, 4-333, & 4-341
California Education Code, Sections 17309, 17311 & 81141

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This interpretation is intended for use by the plan review and field engineers of DSA to indicate an acceptable method for achieving compliance with applicable codes and regulations. Its purpose is to promote more uniform statewide criteria for use in plan review and supervision of construction of public schools, community colleges and essential services buildings. Other methods proposed by design professionals to solve a particular problem may be considered by DSA and reviewed for code and regulation compliance.

Purpose: This IR describes the requirements for the certification and approval of school construction project inspectors. All school construction project inspectors must complete this two-step process of certification and approval by DSA before they can work on school construction projects.

Section 1 of the IR explains the requirements for *DSA Certification* of project inspectors. Section 2 specifies the requirements for *DSA Approval* of the project inspector. Section 3 specifies requirements for acceptance and approval of assistant inspectors.

Certification & Approval – a Two-Step Process

Certification is the first step in becoming a school construction project inspector. An inspector may become *DSA-Certified* by successfully completing the DSA Project Inspector Examination. There are four classes of certification. These classes correspond to a project class assigned to each project by DSA. See Section 1 below. Certification is only one of several factors involved in the approval process.

Approval is the second step. Approval of the project inspector by the DSA Regional Office must be obtained before the inspector can work on a project. *DSA Approval* is based on several factors, one of which is DSA Certification in the proper class. See Section 2 below.

Section 1 – CERTIFICATION of the INSPECTOR

As required by law, all project inspectors must be certified through the DSA Project Inspector Examination Program. An inspector's certification expires four years from the date of issue. To renew the certification, each inspector must complete the requirements of the DSA Inspector Re-Certification Program every four years. The re-certification program consists of training and a re-certification class conducted by DSA. Information regarding the requirements of this program may be obtained on-line at www.dsa.dgs.ca.gov (click on "Inspector Info").

Examinations are given in each of four project classes. The examinations measure the applicant's ability to read and comprehend construction plans and the California Building Standards Code.

The DSA Project Inspector Examination Program does **not** qualify an applicant as a "special" inspector.

The Class 1 Project and the Class 1 Examination

Projects that are designated as Class 1 must contain one or more "Class 1 structures" (typical of community colleges, high schools, and some middle schools) but may also contain Class 2, Class 3, or Class 4 structures. The Class 1 examination is comprehensive; it tests the applicant's knowledge of Class 1, Class 2, Class 3, and Class 4 structures and related code requirements.

Class 1 structures include:

- Buildings or additions of 2,000 square feet or greater that utilize materials other than wood-frame shear walls (masonry/concrete shear walls, steel brace frames, concrete, or steel moment-resisting frames) as the primary lateral-load resistive system.
- Substantial structural alterations to the gravity and/or lateral load-resisting system of the building types described above.

The Class 2 Project and the Class 2 Examination

Projects that are designated as Class 2 must contain one or more “Class 2 structures” (typical of elementary schools and some middle schools) but may also contain Class 3 or Class 4 structures. The Class 2 examination tests the applicant’s knowledge of Class 2, Class 3, and Class 4 structures and related code requirements.

Class 2 structures include:

- Buildings or additions of 2,000 square feet or greater that utilize wood-frame shear walls as the primary lateral load-resistive system. Projects may be single or multi-level, not limited in floor area, and generally have an estimated cost of under \$8,000,000. The project may contain incidental masonry, concrete and/or structural steel construction (e.g. gravity load carrying columns and beams). Buildings may have isolated exceptions to the lateral load resistive system, such as a steel brace frame at one location in the structure.
- Buildings or additions of less than 2,000 square feet in floor area that have primary lateral load-resistive systems utilizing concrete, masonry or steel construction. A single-story masonry building with a regular configuration (see C.B.C. Sec. 1629A.5.2), a floor area of less than 7,000 square feet, and a wood-frame roof structure may be considered to be a Class 2 structure.
- On-site construction of two-story modular buildings utilizing shop-fabricated modular building frames.
- Alteration, modernization, and reconstruction projects that exceed the limitations of the Class 3 scope of work, and do not include substantial alterations to structural systems of concrete, steel or masonry.
- Non-building structures that exceed the limitations of the Class 3 scope of work.

The Class 3 Project and the Class 3 Examination

Projects that are designated as Class 3 must contain one or more “Class 3 structures” (small buildings of wood-frame construction and/or modernization/alteration projects) but may also contain Class 4 structures. The Class 3 examination tests the applicant’s knowledge of both Class 3 and Class 4 structures and related code requirements.

Class 3 structures include:

- Buildings or additions of wood frame single-story construction, with conventional (spread footing) concrete foundations and a total floor area less than 2,000 square feet. Structures must utilize wood-frame shear walls as the primary lateral load-resistive system. The project may include isolated steel or concrete elements (e.g. steel or concrete columns).

- Structural alteration projects limited to wood-frame, single story construction. When deemed appropriate by DSA, alterations to (or addition of) isolated steel, masonry or concrete elements may be included in Class 3 projects. Alteration projects involving significant changes to the lateral load-resisting system may be classified as Class 2 projects.
- Alteration and modernization projects that are primarily non-structural, such as electrical, mechanical, plumbing, disabled access features, and site improvement work, generally with an estimated cost of under \$1,000,000.
- Non-building structures, such as signs and poles less than 35' in height, bleachers with a maximum of 5 rows of seats, walls less than 10' in height above grade, and single-story canopies less than 200 square feet in horizontal projected area.

The Class 4 Project and the Class 4 Examination

Projects that are designated as Class 4 only include “Class 4 structures” (building placement and related site work for factory-built single-story relocatable buildings). The Class 4 examination tests the applicant’s knowledge of Class 4 structures and related code requirements. Class 4 structures include only site installation of factory-built, single-story relocatable buildings.

Relocatable Building Inspector - In Plant (“RBIP” Inspectors)

Inspectors of factory-built relocatable buildings must be certified through either the DSA RBIP examination or the Class 1 project inspector examination. The RBIP examination is scheduled through the DSA Headquarters Office (contact DSA Headquarters Technical Services at 916/323-5971).

For Specific Examination Information

The DSA Project Inspector Examination Program is administered by the DSA Headquarters office. For information regarding the examination schedule, locations, examination fees, or to obtain an application, contact Technical Services at DSA Headquarters, by phone at 916/323-5971, or on-line at www.dsa.dgs.ca.gov (click on “Inspector Info”).

Section 2 - APPROVAL of the PROJECT INSPECTOR

As required by law, all project inspectors must be *DSA Approved* for work on each individual project .



To apply for approval, the design professional in general responsible charge must submit an *Inspector’s Qualification Record* form (Form DSA-5) to the appropriate DSA Regional Office at least ten days prior to the start of construction. The inspector must complete the form. The form must be signed by the inspector, the school district representative, the design professional in general responsible charge, and the structural engineer delegated responsibility for observation of construction.

For Approval on Class 1 and Class 2 projects: Before submitting a Form DSA-5 for Class 1 or Class 2 projects, the design professional in general responsible charge must consult the DSA field engineer assigned to the project by the DSA Regional Office. The design professional and the DSA field engineer must review the inspector’s qualifications for the project with regard to

DSA approval criteria (see *DSA Approval of the Project Inspector* on page 6). The use of assistant inspectors must also be considered at this time (see number 4, *Utilization of Assistant Inspector(s)* on page 5).

Review of the Inspector's Qualifications by the School District and Responsible Design Professionals

The following five items must be reviewed by the design professional in general responsible charge, the structural engineer delegated responsibility for observation of construction, and the school district prior to submitting the Form DSA-5 to the DSA Regional Office for Inspector Approval:

1. The Class of the Inspector's Certification and the Project Class – How it Works

The project inspector's DSA certificate number and class designation must be provided on the Form DSA-5. The project classification must also be provided on the Form DSA-5. The project's classification is determined by DSA during plan review, and is indicated on the *Notice of Progress* (issued during plan review) and the *Approval of Plans* notification (issued after approval of plans and specifications). Project inspectors with Class 1 certification may apply for DSA Approval to inspect **any** project. Project inspectors with Class 2 certification may apply for approval to inspect projects that are designated as Class 2, 3, or 4. Project inspectors with Class 3 certification may apply for approval to inspect projects that are designated as Class 3 or 4. Project inspectors with Class 4 certification may only apply for approval on Class 4 projects.

2. Inspector's Work Experience

DSA approval is contingent upon the inspector's experience in inspection or construction work on building project(s) of a type similar to that of the individual project for which the inspector is applying. The inspector must describe qualifying experience from three building construction projects on the Form DSA-5. Qualifying experience is defined by the types of duties performed and the types of projects on which those duties were performed.

Types of Duties: Prior job positions and responsibilities are the primary considerations of qualifying experience. The inspector's prior responsibilities for either inspection or construction should include experience with the trades that will be utilized on the project for which the inspector is applying. Job positions that may provide qualifying experience include:

- Project Inspector (providing continuous inspection of an entire project). Prior experience as a project inspector is usually required for Class 1 and large Class 2 projects.
- DSA-approved Assistant Inspector.
- General Contractor's Field Superintendent.
- Special Inspector or Construction Trade Foreman. These positions provide qualifying experience only in the specific trade(s) in which the individual worked.

Other job positions are unlikely to provide sufficient experience for approval by DSA as a project inspector.

Types of Projects: The types of projects that provide qualifying experience must be relevant to the type of project for which the inspector is applying. Project aspects (both for prior projects and the project for which the inspector is applying) that must be considered include:

- Materials of the Structural System (wood-frame, concrete, masonry, steel).
- Complexity of the Structural System (configuration of buildings, number of floors, unusual design features).
- Size (square footage of new construction, total construction cost).

3. On-Site Presence of the Project Inspector

Two important aspects must be considered:

- a. The inspector must be present on the job-site when there is construction activity. The inspector's schedule must allocate sufficient time to perform all required duties on the project for which the inspector is applying. The inspector must indicate on the Form DSA-5 whether presence on the job-site will be full-time (40 hours per week or more) or part-time (less than 40 hours per week). Large projects usually require a full-time commitment from the inspector.
- b. If the inspector has other work commitments concurrent with the project for which the inspector is applying, each school project, each non-school project, or other employment commitments must be described on the Form DSA-5. For each concurrent project the following information must be provided:
 - Project name and location
 - DSA Application Number (if school project)
 - Scope of the project (new construction, building size, number of buildings, construction cost)
 - Current status of project (% complete)

The responsible design professionals, the school district, and DSA must conclude that the inspector's schedule will allow for an adequate presence on the job-site. In the event that the school district, the responsible design professional(s), or DSA conclude that the inspector's schedule as described on the Form DSA-5 will not allow for sufficient presence on the job-site, the inspector will be afforded an opportunity to provide additional information for re-evaluation.

The inspector must obtain prior written approval from the school district, the responsible design professional(s), and DSA for any changes to the time commitment or workload from that indicated on the approved Form DSA-5.

4. Utilization of Assistant Inspector(s)

An assistant inspector provides inspection and administrative assistance to the project inspector on a project. Assistant inspectors must be DSA approved in the same manner as project inspectors (refer to Section 3). The scope of all construction work that the assistant

will inspect and any other code-prescribed duties that the assistant will perform must be described on the Form DSA-5A.

On larger projects, (construction cost in excess of \$15,000,000), the necessity to utilize assistant inspector(s) must be assessed. DSA's approval of the project inspector may be contingent upon adequate provision for assistant inspector(s).

5. School District and Design Professional's Interview of the Inspector

DSA recommends that the school district and the responsible design professional(s) conduct a personal interview with the inspector before signing the Form DSA-5. The following points should be considered:

- The inspector's knowledge of his/her role and responsibilities, job duties, and limits of authority.
- Characteristics of the inspector necessary to develop and maintain satisfactory working relationships. Such characteristics include effective communication skills, patience, determination, consistency and the ability to exercise sound judgement.
- Inspector's physical ability and stamina to inspect all construction and to maintain a responsive presence on the job.
- Inspector's knowledge of construction methods, building materials, material testing/special inspection procedures and building codes applicable to the project. The inspector must be able to read and readily comprehend the requirements of the project plans and specifications.

DSA Approval of the Project Inspector

The project inspector must be *DSA-Approved* for each individual project. The DSA field engineer's approval of the proposed inspector is based on the following criteria:

- The proper relationship between the class of the inspector's certification and the project's classification, as described in item number 1 on page 4.
- The inspector's work experience, as described in item number 2 on page 4.
- The inspector's workload and time commitment to the project, as described in item number 3 on page 5.
- The utilization of assistant inspector(s) as described in item number 4 on page 5.
- Satisfactory DSA performance ratings on previous school construction projects (refer to DSA IR A-8).
- Verification that the inspector is employed by the school district.

If the inspector meets the requirements for approval, the DSA field engineer will sign the Form DSA-5, which indicates DSA approval. A copy of the signed Form DSA-5 will be promptly returned to the inspector and the design professional in general responsible charge. If DSA is unable to grant approval, the Form DSA-5 will be promptly returned to the design professional in general responsible charge, with documentation of the reason(s) why approval was not granted.

The proposed inspector may be reconsidered for approval if these documented reasons are satisfactorily addressed on the resubmitted Form DSA-5.

Section 3 – ASSISTANT INSPECTOR PROGRAM

DSA has established the following requirements for the qualification, approval, and use of any assistant inspector on a public school construction project. ←

There are three types of inspectors who may perform code-required inspections on school construction projects:

- **Project Inspector** - each project **must** have a *DSA-Certified* Project Inspector, who is responsible for the inspection of all construction, except inspection performed by a special inspector.
- **Assistant Inspector** - may be utilized, or may be required, to assist the project inspector in completing inspection and administrative duties. An assistant inspector must be qualified by DSA Headquarters, either by acceptance into the Assistant Inspector Program or by DSA Certification as a project inspector.
- **Special Inspector** - a specially qualified person utilized, where required by code, to inspect specific aspects of the work, such as structural steel welding or masonry construction.

The Project Inspector is responsible for ensuring that all code-prescribed inspection and administrative duties are completed. The class 1 project inspector may utilize one or more assistant inspector(s) to perform inspection and administrative duties on a project. A project inspector or assistant inspector who performs more than 50% of all inspections (excluding special inspections) for the project is considered to be the primary on-site inspector.

Requirements for the Use of Any Assistant Inspector

- The project inspector must be a *DSA-Certified Class 1* project inspector for any project on which an assistant inspector is utilized.
- A project inspector may not utilize more than three assistant inspectors at any one time. The project inspector must provide on-site supervision of any assistant inspector. ←
- Upon request, the project inspector must submit a written plan indicating the project inspector's proposed presence at all concurrent projects. The plan must provide for daily on-site supervision of all assistant inspectors utilized by the project inspector.
- The project inspector and assistant inspector must keep a log of time spent on-site, and must indicate this information on each semi-monthly report.
- An assistant inspector can not be utilized as the primary on-site inspector for a Class 1 or Class 2 project, unless the assistant inspector has prior satisfactory experience as the *DSA-Approved* project inspector on a project of similar type and size. As of January 1, 2005, any primary on-site inspector for a Class 1 or Class 2 project must be *DSA-Certified* and approved as the project inspector for the project.
- The project inspector may utilize an assistant inspector as the primary on-site inspector for a Class 3 or Class 4 project, provided the assistant inspector has adequate work experience with the trades that will be utilized on the project.

- An assistant inspector must be qualified by DSA Headquarters, either by acceptance into the Assistant Inspector Program or by DSA Certification as a project inspector.
- The assistant inspector must then be *DSA-Approved* by the appropriate DSA Regional Office for each project on which the assistant inspector works.

Qualification and Approval of an Assistant Inspector - a Two-Step Process

Acceptance into the Assistant Inspector Program, or alternatively, DSA Certification as a project inspector, is the first step in becoming an assistant inspector.

Approval is the second step. DSA Approval of an assistant inspector must be obtained from the appropriate DSA Regional Office before the assistant inspector can work on a project.

Acceptance of the Inspector into the Assistant Inspector Program

The assistant inspector must complete and submit the *Application for Assistant Inspector Program* (posted on the DSA web site at www.dsa.dgs.ca.gov, click on "Inspector Info") to DSA Headquarters, along with an application fee of \$110 (non-refundable) to cover DSA's administrative expenses. The applicant will be notified by mail of acceptance in the program, or will be notified of requirements that must be addressed in order to be accepted. No refund of the application fee can be made.

Upon acceptance into the program, the assistant inspector's name, expiration date, county of residence, and phone number will be posted on the DSA web site (www.dsa.dgs.ca.gov, click on "Inspector Info"). Acceptance of an inspector into the Assistant Inspector Program will expire two years from the date of acceptance, unless the acceptance has been extended. Acceptance may be extended every two years, provided the assistant inspector attends at least one DSA-recognized training seminar within each two year period. Recognized seminars include DSA's Inspector Training seminars, and the "Basics of Public School Inspection" seminar conducted by the American Construction Inspectors Association (ACIA). If DSA acceptance expires, the assistant inspector must reapply for acceptance in accordance with the provisions above. Upon becoming DSA certified as a project inspector, the inspector's listing in the Assistant Inspector Program is terminated.

Criteria for acceptance in the DSA Assistant Inspector Program includes:

- Minimum three years experience in building construction or inspection, which may consist of work experience in one or more construction trades or types of inspection (must be structural, electrical, mechanical, or plumbing work).
- The written recommendation of two design professionals (any California-licensed architect and/or registered structural engineer) on the DSA Form Application for Assistant Inspector Program.
- An assistant inspector must be at least 25 years of age.

Approval of the Assistant Inspector for a Project

An assistant inspector must be *DSA Approved* for each school construction project. An *Assistant Inspector Qualification Record* (Form DSA-5A) must be submitted to the appropriate

DSA Regional Office for approval at least 10 days prior to use of the assistant inspector on the project.

The design professional in general responsible charge is advised to consult the DSA field engineer prior to submittal of the Form DSA-5A to DSA, in order to verify that the assistant inspector meets the criteria for approval by DSA.

Criteria for DSA Approval of an assistant inspector include:

- Acceptance of the assistant inspector in the DSA Assistant Inspector Program, or alternatively, DSA Certification as a project inspector.
- Assistant inspector must have work experience in inspection or construction (refer to Section 2, item 2) with the trades that the assistant inspector will be inspecting.
- Assistant inspector's current workload and time commitment to the project (refer to Section 2, item 3).

Project Inspector's and Assistant Inspector's Responsibilities

A project inspector is responsible for ensuring that all code-prescribed inspection and administrative duties are completed. When a project inspector utilizes an assistant inspector on a project, the following requirements must be fulfilled:

- Prior to the start of construction, the project inspector must complete the DSA *Start of Project Report* (posted on the DSA web site (www.dsa.dgs.ca.gov, click on "Forms")). Both the project inspector and assistant inspector must sign the report.
- The project inspector and assistant inspector must both sign each semi-monthly report.
- The project inspector and assistant inspector must each file a final verified report (Form DSA-6) with DSA.
- At the conclusion of the project, the project inspector must complete the DSA *Close of Project Report* (posted on the DSA web site (www.dsa.dgs.ca.gov, click on "Forms")). The project inspector and assistant inspector both must sign the report.

The DSA field engineer observes the project inspector's and assistant inspector's performance of code-prescribed duties during the course of construction, including the project inspector's monitoring of the assistant inspector's performance (IR A-8, Section 1, item 7).

The DSA field engineer completes an *Inspector's Performance Rating* for the project inspector and for the assistant inspector at the final site visit (refer to IR A-8, Section 2). The performance rating is used by DSA as a basis for approval of the project inspector and the assistant inspector on future projects.